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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/070,153

Applicant(s)

SARGES ET AL.

Examiner

Thanh X Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to amendments and remarks filed July 2, 2004.

Claims 1-41 are currently pending.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-31 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, "incident radiation" lacks proper antecedent basis.

Furthermore, it is unclear what element the radiation is incident on and where the radiation is incident from.

Regarding claim 8, 19, 29 and 39, "the radiation sensor" lacks proper antecedent basis.

Regarding claims 11 and 22, "incident ultraviolet radiation" lacks proper antecedent basis. It is unclear in its given context if the incident ultraviolet radiation is the received or redirected ultraviolet radiation. Furthermore, it is unclear what element the radiation is incident on or where the radiation is incident from.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 8 and 10, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by the publication of Kaas (WO 99/37978, published July 29, 1999).

Regarding claims 1-4, 8 and 10, Kaas discloses (see Fig. 1 and 7) a water treatment ultraviolet (UV) radiation sensor device for detecting UV radiation from a plurality of submerged UV radiation sources (7) disposed in a predefined arc around the sensor device in a radiation field, comprising: a radiation collector (10) configured to (i) receive UV radiation from the UV radiation sources and (ii) redirect the received radiation along a predefined pathway (onto 3, then into 1); and a sensor element (6) configured to detect and respond to radiation along the pathway incident on the sensor element. The predefined arc comprising the arcs and the collector (single fiber) has a generally circular cross-section as claimed. In addition, Kaas discloses (see Fig. 1) the radiation collector is remote from the sensor element.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-41, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurtz et al. (U.S. Patent 5,660,719) in view of Ebel et al. (U.S. Patent 6,592,816).

Regarding claims 1-6, 8-17, 19-27, 29-37 and 39-41, Kurtz et al. disclose (see Fig. 2) a water treatment UV radiation sensor device for detecting UV radiation from a plurality of submerged UV radiation sources (20) disposed in a predefined arc around the sensor device in a radiation field, comprising: a sensor element (112) configured to detect and respond to radiation along the pathway incident on the sensor element. Kurtz et al. also disclose (see Fig. 2) a frame or protecting sleeve having a first support member and at least one radiation source assembly in engagement with the first support member. Kurtz et al. further disclose (see Fig. 2) at least one UV source disposed within a protective sleeve (22). The predefined arc comprising the arcs or partial arcs as claimed. The sensor element of Kurtz et al. appears to be enclosed and coupled to a radiation collector (curved end of tube), however the radiation collector is not explicitly or specifically described. Ebel et al. teach in a UV treatment device (see Fig. 2) a radiation collector (27) configured to (i) receive UV radiation from the UV radiation sources (21, 22) and (ii) redirect the received radiation along a predefined pathway (30) to a sensor element. Ebel et al. further recognize (see col. 4, lines 54-55) that such a collector provides for a large field of view for collecting radiation. Ebel et al. also disclose (see Fig. 2) the collector (27) having a generally convex (spherical part) or concave (indentation in sphere) with a reflective surface (inside sphere) to direct the radiation along the pathway, the sensor is mounted remote from the collector, and the collector has a polygonal or circular cross-section. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide such a

collector in the apparatus of Kurtz et al. in view of Ebel et al. to more effectively collect radiation from a large field of view and obtain improved detection.

Regarding claims 7, 18, 28 and 38, Kurtz et al. (see Fig. 2) appears to show the sensor directly mounted to the collector (end of tube), but it is not explicitly or specifically disclosed. However, directly mounting a sensor to a radiation collector is notoriously well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide such a mounting configuration in the apparatus of Kurtz et al. in view of Ebel et al. to reduce radiation losses between couplings and improve detection.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Thanh X Luu  
Primary Examiner  
Art Unit 2878

08/2004